

Delete claims 1-12 and substitute therefor new claims 54-59 as follows:

sub N1 --54. A DNA sequence encoding a polypeptide in accordance with claim 51.

sub H1 --55. A DNA sequence encoding a polypeptide that binds to TRAF2 and modulates activity of NF- κ B, selected from the group consisting of

(i) a cDNA sequence comprising the nucleotide sequence of SEQ ID NO:1;

E (ii) a cDNA sequence comprising the nucleotide sequence of SEQ ID NO:3, *NO:6*

C3 (iii) a cDNA sequence comprising the nucleotide sequence of SEQ ID NO:4;

(iv) a fragment of a sequence of (i)-(iii) which encodes a polypeptide that binds to TRAF2 and modulates the activity of NF- κ B;

(v) a DNA sequence capable of hybridization to a sequence of (i)-(iv) under moderately stringent conditions and which encodes a polypeptide that binds to TRAF2 and modulates the activity of NF- κ B; and

(vi) any DNA sequence other than those defined in (i)-(v) which encodes a polypeptide in accordance with claim 51.

*SUB
M1*
--56. A DNA sequence in accordance with claim 55,
comprising the nucleotide sequence of SEQ ID NO:1 or SEQ ID
NO:4.

--57. A DNA sequence in accordance with claim 55,
comprising the nucleotide sequence of SEQ ID NO:3.

*SUB
E4*
--58. A DNA sequence in accordance with claim 55,
comprising a DNA sequence encoding the protein NIK of SEQ ID
NO:7.

*C2
Cont.*
--59. A DNA sequence encoding
(1) a polypeptide in accordance with claim 53, or
(2) a DNA sequence capable of binding to a sequence
of (1) under moderately stringent conditions and which encodes
a polypeptide that binds to TRAF2 and modulates the activity
of NF- κ B.--

Delete claims 17-19 and substitute therefore new
claims 51-53 as follows:

*SUB
Hle*
--51. A polypeptide that binds to TRAF2 and
modulates the activity of NF- κ B, said polypeptide comprising:

*C4
E
N*
a) the amino acid sequence of SEQ ID NO:2, an amino
acid sequence encoded by the nucleotide sequence of SEQ ID
NO:3, or the amino acid sequence of SEQ ID NO:5;

b) an amino acid sequence of a fragment of a), which
fragment binds to TRAF2 and modulates the activity of NF- κ B;

SUB
7/4
(correct)

c) an amino acid sequence of an analog of a) or b),
having no more than ten changes in the amino acid sequence of
a) or b), each said change being a substitution, deletion or
insertion of an amino acid, which analog binds to TRAF2 and
modulates the activity of NF- κ B; or

d) a derivative of a), b) or c) which binds to TRAF2
and modulates the activity of NF- κ B.

C4
Cont

--52. A polypeptide in accordance with claim 51,
wherein said polypeptide of (a) is the sequence encoded by the
nucleotide sequence of SEQ ID NO:3.

Sub E3

--53. A polypeptide in accordance with claim 51,
wherein said polypeptide of (a) is NIK (SEQ ID NO:7).--

✓ Claim 13, line 1, change "1" to --55--.

Rewrite claim 20 in amended form as follows:

C5

SUB
7/1

20. (Amended) A NIK [protein, isoforms, analogs,
fragments and derivatives thereof] polypeptide according to
claim [19] 53, wherein said [protein, isoforms, fragments and
derivatives have] polypeptide has at least part of the amino
acid sequence [depicted in Fig. 6] of SEQ ID NO:7.

✓ Claim 22, lines 1-2, change "the TRAF-binding
protein, isoform, analog, fragment or derivative thereof" to -
a polypeptide--;

✓ line 2, change "17" to --51--.

Rewrite claim 23 in amended form as follows:

23. (Amended) A method for the modulation or mediation in cells of the activity of NF- κ B or any other intracellular signaling activity modulated or mediated by TRAF2 [or by other molecules to which a protein, isoform, analog, fragment or derivative thereof according to claim 17 binds], said method comprising treating said cells by introducing into said cells one or more of said [protein, isoform, analog, fragment or derivative thereof] polypeptide in accordance with claim 51 in a form suitable for intracellular introduction thereof, or introducing into said cells a DNA sequence encoding said one or more [protein, isoform, analog, fragment or derivative thereof] said polypeptide in the form of a suitable vector carrying said sequence, said vector being capable of effecting the insertion of said sequence into said cells in a way that said sequence is expressed in said cells.

Claim 24, lines 2-3, change "protein, isoform, fragment, analog or derivative" to --polypeptide--.

Claim 27, line 3, change "TRAF2-binding protein" to --polypeptide--;

line 4, change "1" to --51--.

Claim 29, lines 3-4, change "TRAF2-binding protein" to --polypeptide--;

line 4, change "17" to --51--.

✓ Claim 30, line 1, change "proteins" to --a polypeptide--;

✓ line 2, change "17" to --51--.

✓ Claim 32, lines 2-3, change "TRAF2-binding proteins" to --polypeptide--;

✓ line 3, change "17" to --51--;

✓ lines 3-4, delete ", its biologically active fragments, analogs, derivatives or mixtures thereof".

✓ Claim 33, lines 3-4, change "TRAF2-binding protein, isoform, active fragments or analogs" to --polypeptide--;

✓ line 4, change "17" to --52--.

Rewrite claim 34 in amended form as follows:

c1
34. (Amended) A pharmaceutical composition for modulating the TRAF2 modulated/mediated effect on cells comprising as active ingredient, an oligonucleotide sequence encoding an anti-sense sequence of the [TRAF2-binding protein mRNA sequence] mRNA encoding a polypeptide according to claim [1] 51.

✓ Claim 35, line 3, change "protein" to --polypeptide-- and change "17" to --51--;

✓ line 4, after "10" insert --(SEQ ID NO:3)--.

✓ Claim 36, line 3, change "protein" to --polypeptide-- and change "17" to --51--.

Claim 38, line 3, change "18" to --52--.

Claim 39, line 4, change "19" to --53--.

Rewrite claim 40 in amended form as follows:

40. (Amended) A method for the prevention or treatment of a pathological condition associated with NF- κ B induction or with any other activity mediated by TRAF2 or by other molecules to which a [protein] polypeptide according to claim [17] 51 binds, said method comprising administering to a patient in need an effective amount of a [protein, isoform, fragment, analog or derivative thereof or a mixture of any thereof] polypeptide according to claim [17] 51, or a DNA molecule coding therefor, or a molecule capable of disrupting the interaction of said [protein or isoform, fragment, analog and derivative thereof or a mixture of any thereof] polypeptide according to claim [17] 51 with TRAF2 or any other molecule to which said [protein or isoform, fragment, analog and derivative thereof or a mixture of any thereof] polypeptide according to claim [17] 51 binds.

Claim 43, line 1, change "protein" to --polypeptide--;

line 2, change "17" to --51--;
line 3, change "protein" to --polypeptide--.

Claim 44, line 2, change "protein" to

--polypeptide-- and change "17" to --51--;

line 3, change "protein" to
--polypeptide--.

Rewrite claim 46 in amended form as follows:

46. (Amended) A method for identifying and producing
a ligand capable of modulating the cellular activity modulated
or mediated by a [protein] polypeptide according to claim [17]

51, comprising:

SUB F2
C9
a) screening for a ligand capable of binding to a
polypeptide comprising at least a portion of the NIK sequence
[depicted in Fig. 6] of SEQ ID NO:7;

b) identifying and characterizing a ligand, other
than TRAF2 or portions of a receptor of the TNF/NGF receptor
family, found by screening step to be capable of said binding;
and

c) producing said ligand in substantially isolated
and purified form.

✓ Claim 47, line 4, delete "depicted in Fig. 6" and
insert therefor --of SEQ ID NO:7--.

✓ Claim 49, line 2, change "protein" to
--polypeptide--;

✓ line 3, change "17" to --51--;

✓ line 5, change "protein" to
--polypeptide--; change "17" to --51--.